



COMSATS University, Islamabad
Mid Term Examination, Fall 2021
Department of Computer Science

Course Code – Title: CSC101 – Introduction to ICT
Time Allowed: 1.30 hour

Dated:
Marks:

16 Nov 2021
30

PART 1

Question 1 Mapped to CLO1

- Q1. Given a hard disk with (4 Marks)
- (platters = 4, tracks per platter side = 8, sector per track = 18)
- Calculate the following:
- Number of read/write heads
 - Total tracks in hard disk
 - Total sectors in hard disk
 - Sectors per platter side

Question 2 Mapped to CLO2

- Q2. Do the following: (2 Marks)
- Add $(AC9F2B8E)_{16}$ and $(7D9B3AC)_{16}$
 - Subtract $(10110011)_2$ From $(11010110)_2$

Questions 3-5 Mapped to CLO3

- Q3. Ali wants to back up his data. (3 Marks)
- Give two reasons why making backups is necessary.
 - Ali thinks that making backups will prevent his data from getting viruses. Describe what a virus is and explain why Ali is wrong.
- Q4. Explain the following topologies (Bus, Ring, Star and Mesh) using diagram. (4 Marks)
- Q5. Identify the type of relationship between the following given entities: (2.5 Marks)
- Department and HoD
 - Project and Supervisor
 - Department and Employee
 - Student and Subject
 - Student and Teacher

FA21-BSE-037

Ihizae Shahzad



COMSATS University, Islamabad
Mid Term Examination, Fall 2021
Department of Computer Science

Course Code – Title: CSC101 – Introduction to ICT
Time Allowed: 1.30 hour

Dated: 16 Nov 2021
Marks: 30

PART 2

Questions 6-8 Mapped to CLO4:

Q6. Evaluate (to true or false) each of the following expressions:

(2.5 Marks)

- $14 \leq 14$ OR $14 < 14$
- $-9 > -25$ AND $-25 > -9$
- Not (True)
- $30 < 34$ AND $34 < 56$ OR $27 > 9$
- Not ($28 < 34$ AND $18 < 56$ OR $9 \geq 9$)

Q7. Apply appropriate problem-solving technique and calculate the water bill. Different slabs are used to calculate the bill. Utilization is measured in cubic feet, water company charges the homeowner on one of the following slabs: (6 Marks)

- A flat rate of \$15.00 for usage up to and including 1000 cubic feet.
- \$0.0175 per cubic foot for usage over 1000 cubic feet and up to and including 2000 cubic feet.
- \$0.02 per cubic foot for usage over 2000 cubic feet and up to and including 3000 cubic feet.
- A flat rate of \$70.00 for usage over 3000 cubic feet.

Q8. The XYZ Boutique is having a five-day sale. Each day, starting on Monday, the price will drop 10% of the previous day's price. (6 Marks)

For example, if the original price of a product is \$20.00, the sale price on Monday would be \$18.00 (10% less than the original price). On Tuesday the sale price would be \$16.20 (10% less than Monday). On Wednesday the sale price would be \$14.58; on Thursday the sale price would be \$13.12; and on Friday the sale price would be \$11.81. Draw a flowchart that will calculate the price of an item for each of the five days, given the original price. Test the solution by inputting the item cost.

Good Luck ☺